
Chapter 5 — 2 Mb DTI Implementation

Overview

This chapter provides the information required to install 2 Mb DTI on Meridian 1 Option 11 systems, including:

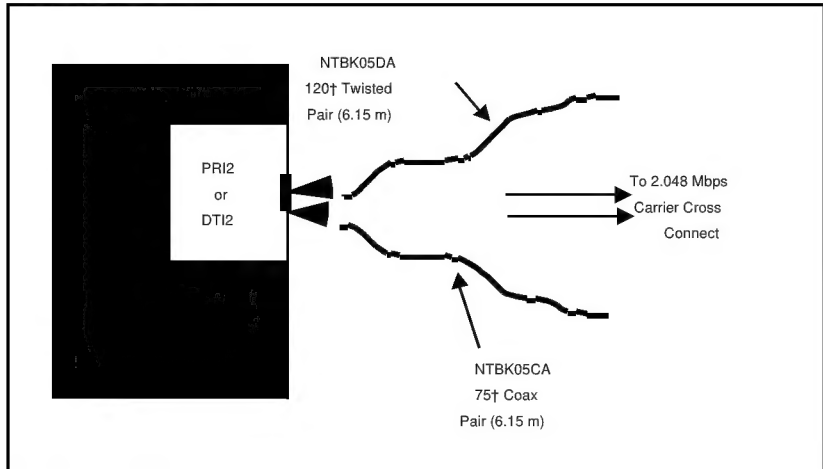
- hardware installation
- software programming

Hardware Requirements

Hardware requirements for 2 Mb DTI are as follows:

- 2 Mb DTI Circuit card - NTAK10
(a Clock Controller is incorporated into the circuit card)
- CEPT Cable - NTBK05DA (120 $\frac{3}{4}$ twisted pair—6.15 m length)
or
CEPT Cable - NTBK05CA (75 $\frac{3}{4}$ coaxial—6.15 m length)

Figure 69
2 Mb DTI Cabling



NTAK10 2 Mb DTI card

The 2 Mb Digital Trunk Interface card provides the physical interface for the digital E-1 carrier on the Option 11 system. The card includes an on-board clock controller and is installed in slots 1 through 9 in the main cabinet. The NTAK10 2 Mb DTI card is also used for ISL shared mode applications.

For information on the NTAK10 faceplate LEDs, refer to the chapter in this guide titled “DTI *maintenance*”. For more information on the operation of the on-board clock controller, refer to the chapter in this guide called “Network clocking”.

Installing DTI hardware

The NTAK10 circuit card can be installed in any available card slot 1 - 9 in the main cabinet.

Inspecting the NTAK10 circuit card

Inspect the circuit card before installing it in the main cabinet:

- Locate the NTAK10 2 Mb circuit card and carefully remove it from its packaging.
- Inspect the circuit card for any visible damage which may have occurred during shipping.

Setting the switches

The NTAK10 incorporates four surface mounted dip switches. The following tables provided information on the various settings and related functions of these switches.

Note: The ON position for all the switches is towards the bottom of the card. This is indicated by a white dot printed on the board adjacent to the bottom left corner of each individual switch.

Set the switches found on the circuit card as per the requirements of your specific installation:

Switch S1—Clock Controller Configuration

This switch enables/disables the on-board Clock Controller.

Switch	Off (Up)	On (Down)
S1-1	Spare	Spare
S1-2	Clock Controller Enabled	Clock Controller Disabled

Switch S2—Carrier Impedance Configuration

This switch sets the carrier impedance to either 120 Ω or 75 Ω . Twisted pair cable is usually associated with 120 Ω . Coaxial cable is usually associated with the 75 Ω setting.

Switch	Off (Up)	On (Down)
S2-1	120 Ω	75 Ω
S2-2	75 Ω	120 Ω

Switch S3—Mode of Operation

This switch selects the mode in which the NTAK10 operates. The NTAK10 supports firmware that allows it to operate in the standard CEPT format mode, or the modified CEPT format used in France.

Switch	Off (Up)	On (Down)
S3-1	Non-French Firmware	French Firmware
S3-2	Spare	Spare

Switch S4—Carrier Shield Grounding

This switch allows for the selective shield grounding of the Tx and/or Rx pairs of the carrier cable. Closing the switch (down position) applies Frame Ground (FGND) to the coaxial carrier cable shield, creating a 75 Ω unbalanced configuration. The Tx and Rx pairs are referenced with respect to the 2 Mb DTI card (i.e. Rx is carrier received from the far end device).

Switch	Off (Up)	On (Down)
S4-1	Receive Shield Unconnected	Frame Ground on Receive Shield
S4-2	Transmit Shield Unconnected	Frame Ground on Transmit Shield

Note: The usual method is to ground the outer conductor of the receive coax signal.

Inserting the NTAK10 into the main cabinet

Slide the circuit card into any unused slot (1 - 9) in the main cabinet. Secure the circuit card in the cabinet by locking the lock latch assemblies.

Connecting the cables

- In the cabling area, located directly below the card cage, remove the retaining bar used to secure the MDF cables. Connect the NTB05DA/CA interface cable to the 50-pin Amphenol connector below the card slot holding the NTAK10 2 Mb DTI circuit card. Re-install the retaining bar to secure the cable(s) in place.
- Terminate the NTB05DA/CA carrier cable as required.

NTB05DA pinouts

The pinouts for the NTB05DA cable are as follows:

From: 50 pin MDF connector	To: 9 pin connector	Colour	Signal
pin 23	pin 6	Black	R0
pin 48	pin 7	White	T0
pin 50	pin 9	Bare	R0/T0 FGND
pin 24	pin 2	Black	R1
pin 49	pin 3	Red	T1
pin 25	pin 5	Bare	R1/T1 FGND

NTBK05CA pinouts

The pinouts for the NTBK05CA cable are as follows:

From: 50 pin MDF connector	To: Transmit coax connector	To: Receive coax connector	To: 50 pin MDF connector
pin 23	Inner conductor	—	—
pin 48	outer conductor	—	—
pin 24	—	Inner conductor	—
pin 49	—	outer conductor	—
pin 21	—	—	pin 49
pin 46	—	—	pin 48

DTI software programming

The following information describes the process required to program the 2 Mb DTI feature in the Meridian 1 Option 11 software.

The information is presented in the sequence in which it must be programmed. As an example, 2 Mb DTI loops must be configured before defining any error detection thresholds, loop timers, pad information or ABCD signaling bit information.

Procedure summary

Step	Overlay	Action
1	LD 17 Configuration Record	Add a 2 Mb DTI loop.
2	LD 73 Digital Data Block	Define the 2 Mb DTI ABCD signaling bit tables
3	LD 73 Digital Data Block	Define the 2 Mb DTI pad tables
4	LD 73 Digital Data Block	Define the 2 Mb DTI loop timers
5	LD 73 Digital Data Block	Define the 2 Mb DTI system timers
6	LD 16 Route Data Block	Define service routes.
7	LD 14 Trunk Data Block	Define the associated list of service trunks.

The prompts and responses are explained in the text that follows. Responses in parentheses are default values throughout the procedure.

Step 1: Add a 2 Mb DTI loop. Use Overlay 17.

The allowable range of base-cabinet slot numbers for the DTI circuit card is 1-9. The CPU/CONF circuit card is provisioned in slot 0, and the TDS card is provisioned in slot 1, effectively leaving slots 2-9 available to these interface card.

Prompt	Response	Description
REQ	CHG	
TYPE	CFN	configuration data block
•		
PARM	YES	
•		
PCML	(MU) A	System PCM law. Default is MU law
•		
•		
CEQU	YES	
•		
•		
DTI2	//	Enter a loop number for 2 Mb DTI.

Step 2: Define the 2 Mb DTI ABCD signaling bit tables. Use Overlay 73 to allow the implementation and administration of the 2 Mb DTI software and hardware.

The “abcd” response represents the following trunk supervisory signals

- Steady signals: bits 0, 1 or U (do-not-care). If c or d are not input they default to 0 and 1 respectively.
- Pulsed signals: P (pulsing), X (not pulsed) or U⁴ (do-not-care).

The following prompts are given when FEAT = ABCD:

Prompt	Response	Description
REQ	NEW,CHG, OUT, PRT, END	
TYPE	DTI2	2 Mb DTI
FEAT	ABCD	Request the digital signaling category. Refer to NTP 553-2911-200 for default abcd table with suggested values.
SICA	2-16	Signaling category
	1	If REQ = PRT then 1 must be input to print default table
	<CR>	If REQ = PRT all signaling tables are printed
TNLS	YES, (NO)	List of trunk TNs using requested SICA tables will (will not) be printed following the table
DFLT	(1)-16	Default signaling category to be used for default values JDML defaults to 16 with <CR> ³ .

Incoming/Outgoing Calls:

IDLE(S)	abcd	(send) idle signal bits
IDLE(R)	abcd	(receive) idle signal bits
FALT(S)	abcd	(send) bits. 2 Mb DTI out-of-service
	N	if FALT (send) signal not required
FALT(R)	abcd	(receive) bits. 2 Mb DTI out-of-service
	N	if FALT (receive) signal not required

Incoming Calls:

SEZ(R)	abcd	seize signal (send or receive) for voice or data calls from or to a non-SL-1.
--------	------	--

Prompt	Response	Description
SEZD(R)	abcd	seize signal (send or receive) for data calls between SL-1s.
	N	if SEZD(R) signal not required
SEZV(R)	abcd	seize signal (send or receive) for voice calls.
	N	if SEZV(R) signals not required
P CALL(R)	abcd	(receive) signal sent during seize by an incoming CO trunk.
TIME	ON, OFF	length of pulse time on, and time off. (default 2 seconds on, 8 seconds off)
SEZA(S)	abcd	seize signal acknowledgment (send).
	N	if SEZA(S) signal not required
P WNKS(S)	abcd	wink start (corresponds to a pulsed seize acknowledgment). Prompted when SEZA(S) not required.
	N	if WNKS(S) signal not required
TIME	10-(220)-630	time for WNKS(S) signal in milliseconds
P DIGT(R)	abcd	(receive) decadic pulses
	N	if DIGT(R) not required
NRCV(S)	abcd	number received signal (send).
	N	if NRCV(S) signal not required
P EOSF(S)	abcd	end of selection free (send)
	N	if EOSF(S) not required
TIME	(100)-150	time for EOSF(S) in milliseconds
P EOSB(S)	abcd	end of selection busy (send)
	N	if EOSB(S) not required
TIME	(100)-150	time for EOSB(S) in milliseconds
P OPCA(R)	abcd	operator calling time (receive) signal
	N	if OPCA(R) not required
TIME	64-(128)-192	time of OPCA(R) pulse in milliseconds
REPT	(1)-5	number of OPCA(R) pulses.
CONN(S)	abcd	connect send

Prompt	Response	Description
CONN(R)	abcd	connect receive
P RRC(S)	abcd	register recall (send) signal. Activated by Malicious Call Trace.
	N	if RRC(S) not required
TIME	10-(100)-150	time of RRC(S) signal in milliseconds
P BURS(S)	abcd	bring up receiver (send). Uses switch-hook flash timer for timer.
	N	if BURS(S) not required
P BURS(R)	abcd	bring up receiver (receive). Uses switch-hook flash timer for timer.
	N	if BURS(R) not required
TIME	64-(128)-192	length of BURS(R) pulse in milliseconds
P CAS(S)	abcd	CAS Flash. Same timing as analogue trunks. Note: Prompted for JDMI only. Operational only if CASM package equipped.
	N	if CAS(S) not required
CLRB(S)	abcd	clearback (send) signal.
	N	if CLRB(S) not required (IDLE signal is used).
P RCTL(S)	abcd	Release control (send) signal.
	N	if RCTL(S) not required Note: Prompted only when CLRB is unused or is defined the same as IDLE.
TIME	100-(150)-300	time value is stored in multiples of 10 milliseconds.
R RCOD(S)	abcd	Release Control Originating party Disconnect. This signal is another pulsed SL-1 signal sent on incoming trunks when the originating party disconnects first.
	N	if RCOD(S) not required
TIME	150	timer value in milliseconds is fixed
P OPRS(R)	abcd	operator (receive) manual recall signal

Prompt	Response	Description
	N	if OPRS(R) not required
TIME	xxx yyy	minimum and maximum time range for OPRS(R) in milliseconds. xxx = 8-(48)-2040 yyy = xxx-(128)-2040
P NXFR(S)	abcd	network transfer signal (send) pulse. Pulse time not variable.
	N	if NXFR(S) not required
P ESNW(S)	abcd	ESN wink signal (send) pulse. Pulse time not variable.
	N	if ESNW(S) not required
P CAS(S)	abcd	Centralized Attendant signal (send) pulse. Pulse time not variable. Note: Prompted for 2 Mb DTI only.
	N	if CAS(S) not required
CLRF(R)	abcd	Clear forward (receive)
	N	if CLRF(R) not required
SOSI	abcd (N)	special operator signal defined undefined. Prompted when OPRC = N

Prompt	Response	Description
Outgoing Calls:		
SEZ(S)	abcd	seize voice or data from or to a non SL-1 switch
SEZD(S)	abcd N	seize data (send) signal. Only for SL-1 to SL-1 applications if SEZD(S) not required
SEZV(S)	abcd	seize voice (send) signal. Only recommended for SL-1 to SL-1 applications
TIME	xxx yyy	minimum and maximum time range for OPRS(R) in milliseconds. xxx = 8-(48)-2040 yyy = xxx-(128)-2040
	N	if SEZV(S) not required
SEZA(R)	abcd N	seize acknowledgment (receive) signal if SEZA(R) not required
P WNKS(R)	abcd	wink start pulsed seize acknowledgment (receive) signal
	N	if P WNKS(R) not required
TIME	20-(140)-500 , 20-(290)-500	minimum and maximum length of WNKS(R) pulse in milliseconds
P EOS(R)	abcd	end of selection (receive) signal
	N	if EOS(R) not required
TIME	(64)-320 64-(256)-320	length of EOS(R) pulse stored in multiples of 8 milliseconds.
CONN(S)	abcd	connect send
CONN(R)	abcd	connect receive
P OPRC(R)	abcd	operator recall signal for special services. minimum three pulses of 160 milliseconds each.
	N	if OPRC(R) not required
P BURS(S)	abcd	bring up receiver (send) for L1 networking

Prompt	Response	Description
	N	if BURS(S) not required
P BURS(R)	abcd	bring up receiver (receive) for L1 networking
	N	if BURS(R) not required
TIME	64-(128)-192	length of BURS(R) pulse in milliseconds.
	N	if SEZV(S) not required
P CAS(R)	abcd	CAS Flash. Same timing as analogue trunks. Prompted for JDMI only. Operational only if CASR package equipped.
	N	if CAS(R) not required
CLRB(R)	abcd	clear back
	N	if CLRB(R) not required, when IDLE would be used
P RCTL(R)	abcd	Release control. Prompted only when CLRB is unused or is defined the same as IDLE.
	N	if RCTL(R) not required
TIME	96-(128)-320 96-(256)-320	time value stored in multiples of 8 milliseconds
P NXFR(R)	abcd	network transfer
	N	if not required
P ESNW(R)	abcd	ESN wink signal
	N	if ESNW(R) not required
P CAS(R)	abcd	centralized attendant service signal. 2 Mb DTI only ³
	N	if CAS(R) not required
CLRF(S)	abcd	Clear forward (send)
	N	if CLRF(S) not required

Prompt	Response	Description
TIME	(0)	800 milliseconds Note: Prompted when the abcd bits entered in response to the CLFR(S) prompt are different from the abcd bits of the IDLE signal
SOSO	abcd,(N)	special operator signal defined (undefined). Note: Prompted when OPRC = N

Step 3: Define the 2 Mb DTI pad tables, using overlay 73. The following prompts in Overlay 73 require a response.

Prompt	Response	Description
REQ	NEW,CHG, OUT, PRT, END	
TYPE	DTI2	2 Mb DTI
FEAT	PAD	Request the digital pad feature.
PDCA	1-16	PAD Category table. If one channel is using the specified table, then the command is aborted. Table 1 cannot be modified or deleted.

Prompt	Response	Description
TNLS	YES (NO)	TN List. This is for the print command only. A YES response means that a list of the trunk TNs using the requested PAD category tables will be printed after the table.
DFLT	(1)-16	For NEW only. The table is used for default values.
The following prompts define the pad levels. The receiving pad code is <i>r</i> and the transmission pad code is <i>t</i>. These entries have the range 0-15. The pad values (in decibels) relating to these codes are shown after this table.		
ONP	<i>r t</i>	On-premises extension
OPX	<i>r t</i>	Off-premises extension
DTT	<i>r t</i>	Digital TIE trunks
SDTT	<i>r t</i>	digital Satellite TIE trunks
NTC	<i>r t</i>	Nontransmission compensated
TRC	<i>r t</i>	Transmission compensated
DCO	<i>r t</i>	digital COT, FEX, WAT, and DID trunks
VNL	<i>r t</i>	VIA NET LOSS
DTO	<i>r t</i>	2 Mb DTI digital TOLL office trunks
ACO	<i>r t</i>	Analogue CO or WATS trunks
AFX	<i>r t</i>	Analogue FEX trunks
ADD	<i>r t</i>	Analogue DID trunks
SATT	<i>r t</i>	analogue satellite TIE trunks

Prompt	Response	Description
ATO	r t	analogue TOLL office trunks
DTI2	r t	2 Mb DTI trunk (prompted only if the 1.5/2 Mb Gateway feature is equipped and TYPE=DTI2) Author's Note—p7/dave/gateway
XUT	r t	analogue CO trunk (prompted only if the 1.5/2 Mb Gateway feature is equipped and TYPE=DTI2) Author's Note—p7/dave/gateway
XEM	r t	analogue TIE trunk (prompted only if the 1.5/2 Mb Gateway feature is equipped and TYPE=DTI2) Author's Note—p7/dave/gateway

The following pads are available for the 2 Mb DTI card. Their respective codes are also given. Positive dB represents loss and negative dB represents gain.

code	0	1	2	3	4	5	6	7
value (dB)	0.0	+1.0	+2.0	+3.0	+4.0	+5.0	+6.0	+7.0
code	8	9	10	11	12	13	14	15
value (dB)	+8.0	+9.0	+10.0	+11.0	+12.0	+13.0	+14.0	-1
code	16	17	18	19	20	21	22	23
value (dB)	-2	-3	-4	-5	-6	-7	-8	-9
code	24	25	26					
value (dB)	-10	idle	+0.6					

Step 4: Define the 2 Mb DTI loop timers, using overlay 73. The following prompts in Overlay 73 require a response.

Prompt	Response	Description
REQ	NEW,CHG, OUT, PRT, END	
TYPE	DTI2	2 Mb DTI
FEAT	LPTI	Set the timers used for a 2 Mb DTI
LOOP	I	2 Mb DTI loop number.
P DIGT(S)	abcd	(send) digit pulse timing from TDS. Bits P, X or U.
	N	if DIGT(S) signal not required
P METR(R)	abcd	metering (receive). Bits P, X or U. Only two P bits allowed. COT and DID trunks only. Note: PPM package must be enabled.
	N	if METR(R) signal not required
EDGE	0 1	PPM bit counted when changed from 1 to 0. PPM bit counted when changed from 0 to 1.
TIME	40-(240)-480	maximum time METR signal can be on in milliseconds.
SASU	0-(1920)-8064	seize acknowledge supervision period in milliseconds. 2 Mb DTI default = 1920

Prompt	Response	Description
MFAO	YES, NO <CR>	DTI card will or will not set bit 3 of timeslot 0 if loss of Multiframe Alignment Signal (MFAS) occurs. 2 Mb DTI default = NO no change is required
SZNI	YES, (NO)	PSTN incoming seizure during lockout of MFAS and far-end fault states allowed (denied)
MFF	CRC (AFF)	Multiframe format - Cyclic Redundancy Check (CRC 4) Alternative Frame Format Note: Prompted for Option 11 only. For non Option 11 only AFF is supported.

The following prompts and associated responses define the grade of service timers for the DTI card. Group I problems are treated individually. They are bipolar violations, bit error rate (frame alignment) slips and CRC-4 errors.

Group II problems are treated as a group. They are bit 3 of TS0 (far end out of service), bit 6 of TS16 (far end lost multiframe alignment), AIS (alarm indication signal), loss of frame alignment and loss of multiframe alignment.

Responses are interpreted as follows:

- mt = maintenance threshold time.
- ct = new call suppression (hardware service removal) threshold time.
- ot = out of service threshold time.
- dt = no new data calls suppression threshold time.

Each of the response times are expressed as follows:

- nnnY = time in milliseconds where nnnn = 20-5000 (input to nearest 20 milliseconds.)
- nnnS = time in seconds where nnn = 1-240

- $nnnM$ = time in minutes where $nnn = 1-240$
- nnH = time in hours where $nn = 1-24$

Prompt	Response	Description
CRC	NC mt dt ct ot	Cyclic redundancy check error counts NC=Error count values are in the range 1-255 mt = Maintenance threshold time (MNT) dt = No new data calls threshold time (NNDC) ct = No new calls threshold time (NNC) ot = Out of service threshold time (OOS). Note: The following requirements must be met for input mt = Maintenance threshold must be equal to or greater than dt. dt = Data calls threshold must be equal to or greater than ct. ct = Calls threshold must be equal to or greater than ot.
BPV	NB mt dt ct ot	Bipolar violation error counts NB = Error count values are in the range 1-255 mt = Maintenance threshold time (MNT) dt = No new data calls threshold time (NNDC) ct = No new calls threshold time (NNC) ot = Out of service threshold time (OOS). Note: The following requirements must be met for this input: $mt = >dt = >ct = >ot$.
FAP	NF mt dt ct ot	frame alignment problem thresholds NF = Error count values are in the range 1-255 mt = Maintenance threshold time (MNT) dt = No new data calls threshold time (NNDC) ct = No new calls threshold time (NNC) ot = Out of service threshold time Note: The following requirements must be met for this input: $mt = >dt = >ct = >ot$.

Prompt	Response	Description
SLP	NS mt dt ct ot	Maintenance threshold slip count NS = Error count values are in the range 1-255 mt = Maintenance threshold time (MNT) dt = No new data calls threshold time (NNDC) ct = No new calls threshold time (NNC) ot = Out of service threshold time (OOS).
GP2	T2 mt dt ct ot	Group 2 error thresholds. This is the maximum amount of time that can occur before software checks the associated thresholds of 120 to 32,640 msec and rounds it to the closest multiple of 128 msec. T2 error count values are in the range 1-(20)-255. NC = Error count values are in the range 1-255 mt = Maintenance threshold time (MNT) dt = No new data calls threshold time (NNDC) ct = No new calls threshold time (NNC) ot = Out of service threshold time (OOS). Note: The following requirements must be met for this input: mt = >dt = >ct = >ot.
FRFW	YES,(NO)	This 2 Mb DTI loop is (is not) equipped with special Firmware for France.

Step 5: Define the 2 Mb DTI system timers, using overlay 73. The following prompts in Overlay 73 require a response.

Prompt	Response	Description
REQ	NEW,CHG, OUT, PRT, END	
TYPE	DTI2	2 Mb DTI
FEAT	SYTI	Change the switch timers and counters for 2 Mb DTI. There is only one such block per switch.
MAND	0-(15)-1440	maintenance guard time in minutes. Note: For 2 Mb DTI only.
NCSD	0-(15)-1440 1S-59S	new call suppression guard time in minutes and seconds. Note: For 2 Mb DTI only.
OSGD	0-(15)-1440	out of service guard time in minutes. Note: For 2 Mb DTI only.
OOSC	0-(5)-127	out of service occurrences since midnight (DTI disabled). Note: For 2 Mb DTI only.
PERS	0-(100)-254	persistence timer in milliseconds for far end problems. Note: For 2 Mb DTI only.
DBNC	(10)-32	debounce timer in milliseconds Note: For 2 Mb DTI Option 11 only
CLKN	1-9	Clock controller slot number
	<CR>	no change for defaults
	X	to remove clock controller data
PREF CK0	c	primary reference for clock controller zero. The response is the loop from which the clock controller will be deriving its primary clock pulses. NOT PROMPTED FOR Option 11
	<CR>	primary reference remains at current setting.

Prompt	Response	Description
	X	primary reference reverts to the free-run mode.
SREF CK0	c	secondary reference for clock controller zero. The response is the loop from which the clock controller will be deriving its secondary clock pulses.
	<CR>	secondary reference remains at current setting.
	X	secondary reference reverts to the free-run mode.
	C7	Card number for the secondary reference clock for clock controller 0 for Option 11 only. 10/09/91 Option 11
	<CR>	primary reference remains at current setting.
	X	primary reference reverts to the free-run mode.
SREF CK1	c	secondary reference for clock controller one. The response is the loop from which the clock controller will be deriving its secondary clock pulses. NOT PROMPTED FOR Option 11
	<CR>	secondary reference remains at current setting.
	X	secondary reference reverts to the free-run mode.
		Note: The clock controller prompts will only appear for clocks which are valid for the machine type being configured. The prompts will only appear if the system is in a valid state for the definition of the 2 Mb DTI clock controller data (i.e., the 1.5-Mb DTI clock references must be unused or in a free-run mode).
CCGD	0-(15)-1440	clock controller free run guard time in minutes.

Prompt	Response	Description
CCAR	0-(15)	clock controller audit rate. The time, in minutes, between normal CC audits. Only programmable on units equipped with 2-Mb DTI. Note: Before programming clock controller references, the QPC775 clock controller card(s) must be plugged in, and the switches on the system's QPC441 3 Port Extender appropriately set. Unless this is done, the PREF and SREF prompts are not given.

Step 6: Define service routes. Use Overlay 16 to configure service routes or set the NRAG duration timer.

Prompt	Response	Description
REQ	NEW,CHG, OUT	
TYPE	RDB	route data block
CUST	0-31 0-511	customer number all system options other than 71, XN or NT system options 71, XN and NT
ROUT	0-30, 32-127	route number
TKTP	TIE COT DID	service routes allowed with ISDN —Tie trunk route (the only service trunk type permitted for SL-1 to SL-1 connections) —Central office trunk —Direct Inward Dial trunk
RCLS	(EXT) INT	class marked route as Internal or External
DTRK	YES (NO)	digital trunk route —digital —analogue
DGTP	DTI2	Select a digital trunk type of 2 Mb DTI
•		
•		
NCNA	YES, (NO)	Network Call Name is (is not) allowed
NCRD	YES, (NO)	Network Call Redirection. Allows network call redirection messages to be sent (or blocks messages if NCRD =no).

Prompt	Response	Description
PTYP	(ATT) AST AOT (DTT) DCT DST	Port type at far end: Analogue tie trunk routes: —analogue Tie trunk —analogue satellite SL-1 Tie trunk or ESN satellite Meridian SL-1 Tie trunk —analogue Tie trunk, used instead of ATT whenever the Meridian SL-1 has one or more digital satellite trunk routes (DST) to any digital satellite SL-1 which includes OPX sets Digital tie trunk routes: —digital Tie trunk —combination digital Tie trunk —digital satellite SL-1 Tie trunk
AUTO	YES,(NO)	auto-terminate must be NO if response to DSEL is VOD
ICOG	IAO ICT OGT	incoming and outgoing trunk incoming trunk outgoing trunk
SRCH	(LIN) RRB	linear search, or round-robin search—use for outgoing trunks
ACOD	xxxx	trunk route access code
TARG	1-15	trunk access restriction group for routes
OABS	0-9	outgoing digit(s) to be absorbed
INST	(0)-999	digits to be inserted
CNTL	(NO),YES	changes to controls or timers
NEDC		near end disconnect control
	ETH	either end control
	ORG	originating end control. Default for TIE, ATVN, DID, and CCSA trunk types
FEDC		far end disconnect control Note: Loop start trunks may be assigned either ETH or ORG.
	ETH	either end

Prompt	Response	Description
	FEC	far end
	JNT	joint
	(ORG)	originating end
DLTN	YES, (NO)	dial tone on originating calls
TIMER	(30)-240	Network Ring Again duration timer—time is in minutes Note: Package 148, Advanced ISDN Features, is required.

Step 7: Define the associated list of service trunks. Use Overlay 14.

Prompt	Response	Description
REQ	NEW,CHG, MOV,OUT	
TYPE	TIE COT DID	—Tie trunk route (only type allowed with SL-1 to SL-1 ISDN ISL or 2 Mb DTI) —Central Office trunk data block —Direct Inward Dial trunk data block
CHID		
TN	l c	terminal number address—use loop number created in Overlay 17 l = 0-9 —2 Mb DTI loop number c = 1-30 —2 Mb DTI channel
TOTN	l c	new loop and channel. Loop must be a 2 Mb DTI loop. l = 0-9 —2 Mb DTI loop number c = 1-30 —2 Mb DTI channel
PDCA	(1) - 16	Pad Category Number. This prompt is given if the loop is a 2 Mb DTI loop, or if the loop is a 2 Mb DTI loop and the 1.5/2 Mb Gateway feature is equipped. For 2 to 16, the pad category used must already be defined in Overlay 73.

PCML	MU, A	System PCM law. Prompted if the loop is 2 Mb DTI, or if the loop is a 2 Mb DTI loop and the 2 Mb Gateway feature is equipped. The default was entered in the PCML prompt in Overlay 17.
CUST	0-31	customer number
NCOS	0-3 0-7 0-15	network class-of-service group number: CDP BARS/NFCR NARS
RTMB	0-127 1-254	route and member numbers
NITE	xxxx	night-service directory number
TGAR	(0)-15	trunk group access restriction
CLS		class-of-service restrictions Note: If DIP option is selected, a new SLCA table must be defined in LD 73.